

**Planetary Forecaster**  
**How Does Temperature Change as Pressure Changes?**  
**LS 5.5**

**Predict**

Complete the following statements. Choose the terms that best fit your predictions.

1. If high-pressure air is released and allowed to expand, its pressure will (**increase, stay the same, decrease**)?
  
2. If high-pressure air is released and allowed to expand, its temperature will (**increase, stay the same, decrease**)?

**Procedure:**

Read pages 148 and 150 and follow the directions step by step carefully,

**Air Pressure and Temperature**

	Squeezability	Mass	Temperature
High Pressure			
Low Pressure			
Change in Pressure			

**Analyze Your Data:**

1. What happened to the weight of the bottle after you released their pressure?

Why do think it changed the way it did?

2. What happened to the temperature after you released the pressure?

Why do you think it changed the way it did?

3. What happened to the squeezability after you released the pressure?

Why do you think it changed the way it did?

4. What relationship between air pressure and air temperature do you see?

5. Suppose the bottle of air under high pressure represents atmospheric pressure at sea level. What does the low-pressure bottle of air represent?

6. Mount Everest has the highest elevation on Earth. Use what you learned from this experiment to explain why the top of Mount Everest is so cold.

**What is the Point?** *Read as a class.*